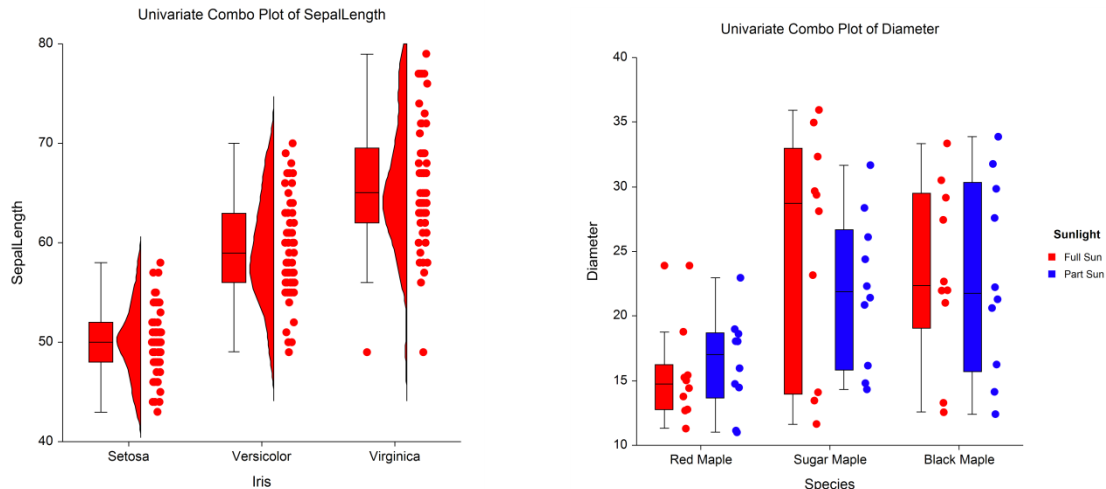


## Chapter 145

# Combo Charts

## Introduction

When analyzing data, you often need to study the characteristics of a single group of numbers, observations, or measurements. You might want to know the center and the spread about this central value. You might want to investigate extreme values (referred to as outliers) or study the distribution or pattern of the data values. Several plots are available to allow you to study the distribution. These include box plots, density plots, dot plots, error-bar plots, histograms, and percentile plots. The Combo Chart procedures allow you to combine any combination of these six plots on a single plot.



For details of the individual aspects of each plot type, go to the corresponding chapter for that plot type.

## Data Structure

A combo chart is constructed from a numeric variable. A second variable may be used to divide the first variable into groups (e.g., age group or gender). In the two-factor procedure, a third variable may be used to divide the groups into subgroups.

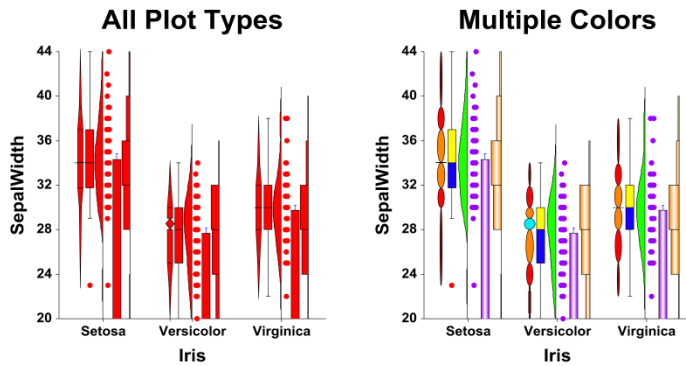
# Combo Plot Window Options

This section describes the specific options available on the Combo Plot window, which is displayed when the Combo Plot button is clicked. Common options, such as axes, labels, legends, and titles are documented in the Graphics Components chapter.

## Combo Plot Tab

### Plot Contents Section

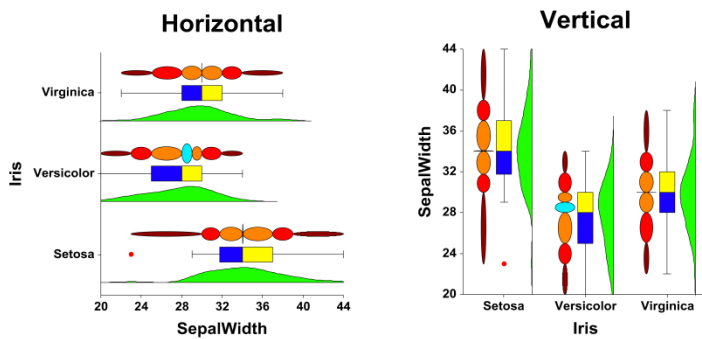
You can choose which of the individual plots you want to display.



## Layout Tab

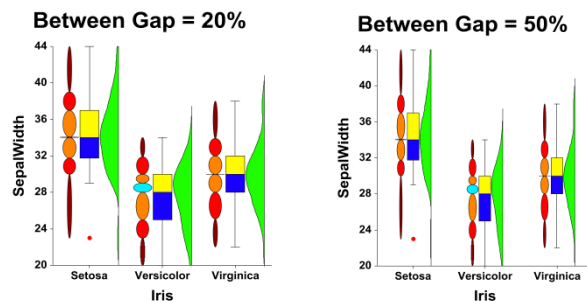
### Orientation Section

You can orient the plot horizontally or vertically.



## Object Spacing and Size Section

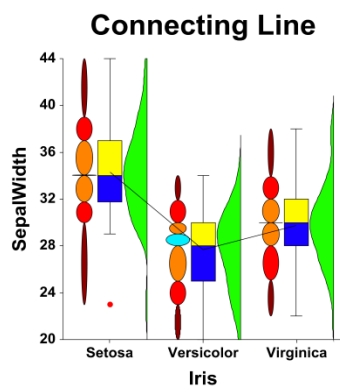
You can change the size of the gap between individual plots.



## Connecting Lines Tab

### Connect Between Groups Section

You can add reference lines at group means and percentiles.



## Titles, Legend, Numeric Axis, Group Axis, Grid Lines, and Background Tabs

Details on setting the options in these tabs are given in the Graphics Components chapter.

## Example 1 – Creating a Combo Chart

This section presents an example of how to generate a combo chart. The data used are from the Fisher dataset. We will create combo charts of the *SepalLength* variable, breaking on the type of iris.

### Setup

To run this example, complete the following steps:

#### 1 Open the Fisher example dataset

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Fisher** and click **OK**.

#### 2 Specify the Combo Charts procedure options

- Find and open the **Combo Charts** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 1** settings file. To load these settings to the procedure window, click **Open Example Settings File** in the Help Center or File menu.

Variables Tab

---

Data Variable(s).....**SepalLength**  
 Horizontal (Group) Variable .....**Iris**

Combo Chart Format (*Click the Button*)

---

*Combo Plot Tab*

Box Plot .....**Checked**  
 Density Plot.....**Checked**  
 Dot Plot.....**Checked**

*Dot Plot Tab*

Jittering.....**Checked**

Reports Options (*in the Toolbar*)

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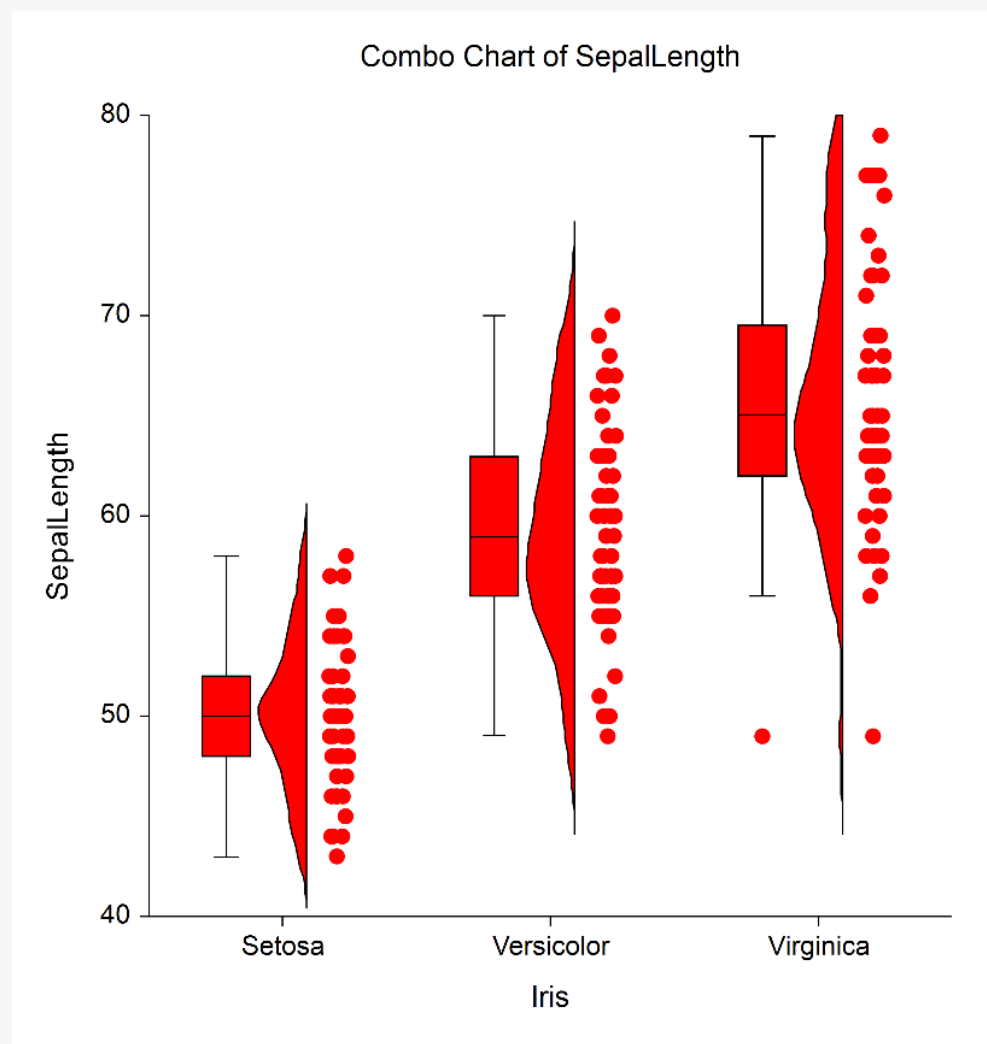
Variable Labels.....**Column Names**  
 Data Labels.....**Value Labels**

#### 3 Run the procedure

- Click the **Run** button to perform the calculations and generate the output.

## Combo Chart Output

### Combo Charts



## Example 2 – Creating a Combo Chart with Subgroups

This section presents an example of how to generate a combo chart with subgroups. The data used are from the fictitious Tree dataset. We will create combo charts of the *Diameter* variable, grouping on *Species*, with subgroups according to *Sunlight*.

### Setup

To run this example, complete the following steps:

#### 1 Open the Tree example dataset

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Tree** and click **OK**.

#### 2 Specify the Combo Charts (2 Factors) procedure options

- Find and open the **Combo Charts (2 Factors)** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 2** settings file. To load these settings to the procedure window, click **Open Example Settings File** in the Help Center or File menu.

##### Variables Tab

Data Variable(s).....**Diameter**  
 Horizontal (Group) Variable.....**Species**  
 Legend (Subgroup) Variable.....**Sunlight**

##### Combo Chart Format (*Click the Button*)

##### Combo Plot Tab

Box Plot.....**Checked**  
 Dot Plot.....**Checked**

##### Dot Plot Tab

Jittering.....**Checked**

##### Reports Options (in the Toolbar)

Data Labels.....**Value Labels**

#### 3 Run the procedure

- Click the **Run** button to perform the calculations and generate the output.

## Combo Chart Output

### Combo Charts

